

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/002351

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C07K14/285

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>SMOOT LAURA M ET AL: "Genomic analysis of the F3031 Brazilian purpuric fever clone of <i>Haemophilus influenzae</i> biogroup <i>aegyptius</i> by PCR-based subtractive hybridization"  <i>INFECTION AND IMMUNITY</i>, vol. 70, no. 5, May 2002 (2002-05), pages 2694-2699, XP002317587  ISSN: 0019-9567  cited in the application abstract  page 2696; table 2  page 2698, right-hand column, paragraphs 2,3  -----</p>	1-13
A	<p>WO 94/00149 A (MICROCARB INC)  6 January 1994 (1994-01-06)  the whole document  -----</p>	1-13 -----

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

14 February 2005

30.06.2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Grötzinger, T

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PCT/IB2004/002351

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 03/010194 A (CHIRON SPA; ARICO, MARIA; COMANDUCCI, MAURIZIO; CHIRON SRL)  6 February 2003 (2003-02-06)  the whole document</p> <p>-----</p>	1-13
A	<p>KOMATSUZAWA H ET AL: "Identification of six major outer membrane proteins from <i>Actinobacillus actinomycetemcomitans</i>"  <i>GENE: AN INTERNATIONAL JOURNAL ON GENES AND GENOMES</i>, ELSEVIER SCIENCE PUBLISHERS, BARKING, GB,  vol. 288, no. 1-2,  17 April 2002 (2002-04-17), pages 195-201,  XP004358912  ISSN: 0378-1119  the whole document</p> <p>-----</p>	1-13
A	<p>HOICZYK EGBERT ET AL: "Structure and sequence analysis of <i>Yersinia YadA</i> and <i>Moraxella UspAs</i> reveal a novel class of adhesins"  <i>EMBO (EUROPEAN MOLECULAR BIOLOGY ORGANIZATION) JOURNAL</i>,  vol. 19, no. 22,  15 November 2000 (2000-11-15), pages 5989-5999, XP002317588  ISSN: 0261-4189  cited in the application  the whole document</p> <p>-----</p>	1-13

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2004/002351

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  
Although claim 13 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6 (partially), 7, 8-13 (partially)

#### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6 (partially), 7, 8-13 (partially)

Antigen shown in SEQ ID N0:51 and embodiments involving the use thereof.

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2. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:1 and embodiments involving the use thereof.

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3. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:2 and embodiments involving the use thereof.

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4. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:3 and embodiments involving the use thereof.

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5. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:4 and embodiments involving the use thereof.

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6. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:5 and embodiments involving the use thereof.

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7. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:6 and embodiments involving the use thereof.

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8. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:7 and embodiments involving the use thereof.

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9. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:8 and embodiments involving the use thereof.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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10. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:9 and embodiments involving the use thereof.

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11. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:10 and embodiments involving the use thereof.

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12. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:11 and embodiments involving the use thereof.

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13. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:12 and embodiments involving the use thereof.

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14. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:13 and embodiments involving the use thereof.

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15. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:14 and embodiments involving the use thereof.

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16. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:15 and embodiments involving the use thereof.

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17. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:16 and embodiments involving the use thereof.

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18. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID NO:17 and embodiments involving the use thereof.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

19. claims: 1-6 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:18 and embodiments involving the  
use thereof.

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20. claims: 1-5 (partially), 8-13 (partially)

Antigen shown in SEQ ID N0:54 and embodiments involving the  
use thereof.

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International Application No

PCT/IB2004/002351

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 9400149	A	06-01-1994		US 5843463 A AT 176989 T CA 2098598 A1 DE 69130955 D1 DE 69130955 T2 DK 565590 T3 EP 0565590 A1 ES 2131066 T3 JP 6508346 T JP 3330935 B2 WO 9210936 A1 WO 9400149 A1 US 5721115 A US 5679547 A CA 2138765 A1 EP 0647139 A1 JP 2805174 B2 JP 7509693 T		01-12-1998 15-03-1999 22-06-1992 08-04-1999 01-07-1999 27-09-1999 20-10-1993 16-07-1999 22-09-1994 07-10-2002 09-07-1992 06-01-1994 24-02-1998 21-10-1997 06-01-1994 12-04-1995 30-09-1998 26-10-1995
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WO 03010194	A	06-02-2003		BR 0211494 A CA 2452836 A1 EP 1412381 A2 WO 03010194 A2 JP 2005503785 T BR 0212363 A CA 2459816 A1 CN 1582297 A EP 1423419 A2 WO 03020756 A2 JP 2005508156 T NZ 532115 A		17-08-2004 06-02-2003 28-04-2004 06-02-2003 10-02-2005 10-08-2004 13-03-2003 16-02-2005 02-06-2004 13-03-2003 31-03-2005 29-04-2005
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